

REMARKS

In response to the Office Action from the Patent Examiner dated 29 June 2006, Applicant respectfully offers this Amendment. Reconsideration and reevaluation of the application, as amended, is respectfully requested.

5 More specifically, the Examiner has rejected claims 1 thru 5 and 21 thru 26 under 35 U.S.C. § 102(b) as being anticipated by Keefer (U.S. 4,230,564). The Examiner states that Keefer teaches an apparatus and process for centrifugally separating an affluent stream using a membrane. The Examiner opines that the apparatus comprises a rotor cap, an inlet stream, a rotor bowl connected to the rotor cone cap, and having an array of cavities each having a
10 membrane element, a permeate outlet, and the apparatus having drive means.

Additionally, at page 3 of the Office Action, the Examiner rejects claims 1 and 21 under 35 U.S.C. § 102(b) as being anticipated by Siwecki et al (U.S. 4,333,832). The Examiner states that Siwecki teaches an apparatus and process for centrifugally separating a stream using a membrane. The apparatus comprising a rotor cone cap, an inlet stream, a rotor bowl, connected
15 to the rotor cone cap, and having an array of cavities each having a membrane element, a permeate outlet, and the apparatus having drive means.

The Examiner also rejects certain claims under the obviousness standard. More specifically, at page 4 of the Office Action, the Examiner rejects claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Siwecki et al. The Examiner notes that at the bottom of page
20 4, the Siwecki reference does not specify the cantor angle. However, the Examiner states that this angle does not seem to be critical. At page 5, the claims 5 thru 20 were rejected under § 103(a) as being unpatentable over Keefer as applied to claims 1 thru 5 and 21 thru 25 above and further in view of Siwecki. The Examiner states that it would have been obvious to one of ordinary skill in the art to provide an angle to the horizontal or the vertical to the membrane
25 cavities as taught by Siwecki in the teaching of Keefer to optimize the drawing concentrate flow,

without unduly increasing the power requirement. The Examiner states that the cantor angle of 30 to 50 degrees is also a standard known for cavities in a centrifuge.

Applicant has amended the independent claims of this application. Applicant respectfully submits that the remaining claims, namely claims 1, 4 through 11, 14 through 21, and 24 through 26 are now in a position for allowance. Applicant respectfully submits that the prior art does not teach a rotor cone cap having an inner conical wall, with a baffle plate extending about the periphery of the inner conical wall to distribute the stream radially inward. Additionally, the prior art does not teach a plurality of impeller vanes arranged on the inner portion of the rotor bowl, wherein the baffle plate directs the stream to the impeller vanes, and wherein the impeller vanes comprise a plurality of vertically extending members. Further, the prior art does not teach membranes for separating the impurities from the stream that are operatively positioned within an array of cavities, wherein the array of cavities is arranged to received the stream from the impeller, as fully set out in independent claims 1, 11, and 21.

Keefer teaches three rotors rotating at different speeds, having rotors that create an internal pump. The present apparatus has only one rotor that rotates at one speed (having no need for a center shaft, bearings and bushing as taught by Keefer). Additionally, Keefer uses the working pressure of a feed pump. Applicant's apparatus does not use external pump pressure for trans-membrane pressures. With reference to Siwecki, the rotor cap inlet stream and rotor bowl does not act as one unit, as Siwecki pipes fluid into canisters on the off axis support structures; also the input flows through a rotating union (ostensibly for external pump assistance to create trans-membrane pressure). Siwecki also has flow channels that are not part of the rotor bowl, which is distinction from Applicant's present invention.

Additionally, Applicant respectfully submits that with reference to the obvious rejections under 35 U.S.C. § 103(a), there must be a basis in the art for combining or modifying references. As set out in the MPEP § 2143.01, the mere fact that references can be combined

or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. Most, if not all inventions arise from a combination of old elements.


Thus every element of the claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. (see In Re Kotzab, 217 F.3d 1365, 55 USPQ 2d 1313 (Fed. Cir. 2000).

In conclusion, Applicant respectfully submits that the remaining claims, namely claims 1, 4 through 11, 14 through 21, and 24 through 26 are now in a position for allowance. Additionally, claims 2, 3, 12, 13, 22, and 23 have been canceled without prejudice nor disclaimer and to the subject matter contained therein. If the Examiner has any questions, the Examiner is kindly requested to contact the undersigned. Allowance at an early date is respectfully submitted.

Respectfully Submitted,

15-Sept-2006

Date



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